

*Crossonema octozonale* n. sp. on Japanese cedar from Japan

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*Crossonema (Seriespinula) octozonale* n. sp. was described based on the specimens collected from soil around roots of Japanese cedar (*Cryptomeria japonica* D. Don) at Fukushima, Japan. This species is characterized by eight longitudinal bands of spines, a comparatively long and slender stylet (97–112 $\mu$ ), 55–58 total annules, and the head annules which consist of two, set off from the body; the first annule with smooth margin and wider than the finely crenated second annule. This species differs from all of the described species in the subgenus in having smaller number of the longitudinal bands of spines. *Jap. J. Nematol.* 4:47–50 (1974)

The nematodes were collected from soil by the sugar centrifugal flotation technique, killed by gentle heat and fixed in TAF. Some specimens were dehydrated by glycerin and mounted in paraffin-ring slides. For the scanning electron microscopy, some of specimens post-fixed by 1% OsO<sub>4</sub> were processed as described by Stone and Green.<sup>2)</sup>

*Crossonema (Seriespinula)*  
*octozonale* n. sp.

Six females: L=0.34–0.45mm, a=7–8, a'=8–10, b=2.8–3.3, c=10–16, V=85–88, St=97–112 $\mu$ , Cp=85–97 $\mu$ , R=55–58, Rex=21–22, RV=10–11, Ran=5–6, RVan=3–4.

*Female (Holotype)*: L=0.39mm, a=7, a'=9, b=3.0, c=13, V=87, St=106 $\mu$ , Cp=91 $\mu$ , R=57, Rex=21, RV=11, Ran=6, RVan=4.

Body cylindrical, almost straight when fixed, tapering anteriorly from oesophageal base to head and posteriorly abruptly behind vulva to caudal end. Total annules 55–58.

Anterior two annules (head annules) distinctly set off from body. First annule, wider than second annule (18–21 $\mu$  and 13–18.5 $\mu$ ), thin, saucer-

shaped, bearing smooth margin and often wavy. Second annule collar-like (rarely outstretched); the margin finely crenated in cross-section view. Lip region consisting of six well-developed lips, prominent, dome-shaped, and surrounded by first annule. The lips connected along the margin of the labial disc. Lateral two lips rather oval. A papilla (submedian lobe-like) present on four sublateral lips. Amphidial openings crescent to slitted, located between the labial disc and the lateral lips.

Body annule retrorse, bearing a fringe of slightly curved spines with rounded ends. Spines arranged in groups of 2–3 (sometimes 1–4) forming eight longitudinal bands at a various distance each other; generally one ventrally, three dorsally, four (2 $\times$ 2) laterally. On both extrimities of body, spines not arranged in definite groups. Spines in various length ranging 2–11 $\mu$ , anteriorly shorter and posteriorly longer.

Spear slender, 97–112 $\mu$  long, extending through 18–20 annules from anterior end; conical part of spear 85–97 $\mu$  in length; spear knobs anteriorly pointed, 8–9 $\mu$  across. Excretory pore located on 21–22nd annule (113–138 $\mu$ ) from anterior end. Oesophagus 121–137 $\mu$ , extending through 21–23 annules from anterior end; isthmus short and broad.

Vulva located on 10–11th annule from termi-

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nus; vulval lips prominent, anterior lip overhanging posterior one with beak-like projection. Ovary outstretched, reaching base of the oesophagus. Spermatheca present, but no spermatozoa observed in the specimens examined. Anus located on 5-6th annule from terminus. Tail attenuated; terminus elongated, sometimes branched or bilobed. Generally four annules between vulva and anus.

*Male* : Unknown.

*Holotype* : Female on slide no. 72/10/1, deposited in the Nematology Collection of the Central Agricultural Experiment Station, Konosu, Saitama, Japan.

*Paratypes* : Slide nos. 72/10/2-72/10/5, deposited as above.

*Type habitat* : Soil around roots of Japanese cedar (*Cryptomeria japonica* D. Don).

*Type locality* : Izumisawa, Odaka, Fukushima, Japan.

*Diagnosis* : *Crossonema* (*Seriespinula*) *octozonale*

n. sp. comes close to *C. (S.) venustum* Mehta and Raski, 1971<sup>1)</sup>, but differs in the fewer annules (55-58 in *C. octozonale* and 76-90 in *C. venustum*), the fewer longitudinal bands of spines (8 in *C. octozonale* and 10 in *C. venustum*), and the position of excretory pore (Rex=21-22 in *C. octozonale* and 32-33 in *C. venustum*).

This new species can be easily differentiated from the other members of subgenus *Seriespinula* by its fewer longitudinal bands of spines (10-15 in others).

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#### LITERATURE CITED

- 1) Mehta, U. K. & Raski, D. J. (1971) Indian J. Nematol. 1, 145-198.
- 2) Stone, A. R. & Green, C. D. (1971) Nematologica 17, 490-491.

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#### 和 文 摘 要

### トゲワセンチュウの新種, *Crossonema octozonale*

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福島県のスギ根辺土壌から採集したトゲワセンチュウ (*Crossonema*) を新種として記載した。

本種は棘状突起が2, 3本ずつ組になり、縦に8列の帯状を呈することで *Seriespinula* 亜属に位置づけられる。また、体環数55~58、口針長97~112 $\mu$ 、head annuleが2で他の体環と明確に区別されること、first head

annuleが皿状で縁はsmooth、second head annuleがfirst head annuleより小さく、縁は細かい鋸歯状、などの形態的特徴をそなえる。*Seriespinula* 亜属の既知種の棘状突起の縦帯数は10~15で、本種のように8列をもつ種はなく、本種を *Crossonema* (*Seriespinula*) *octozonale* と命名し発表する。

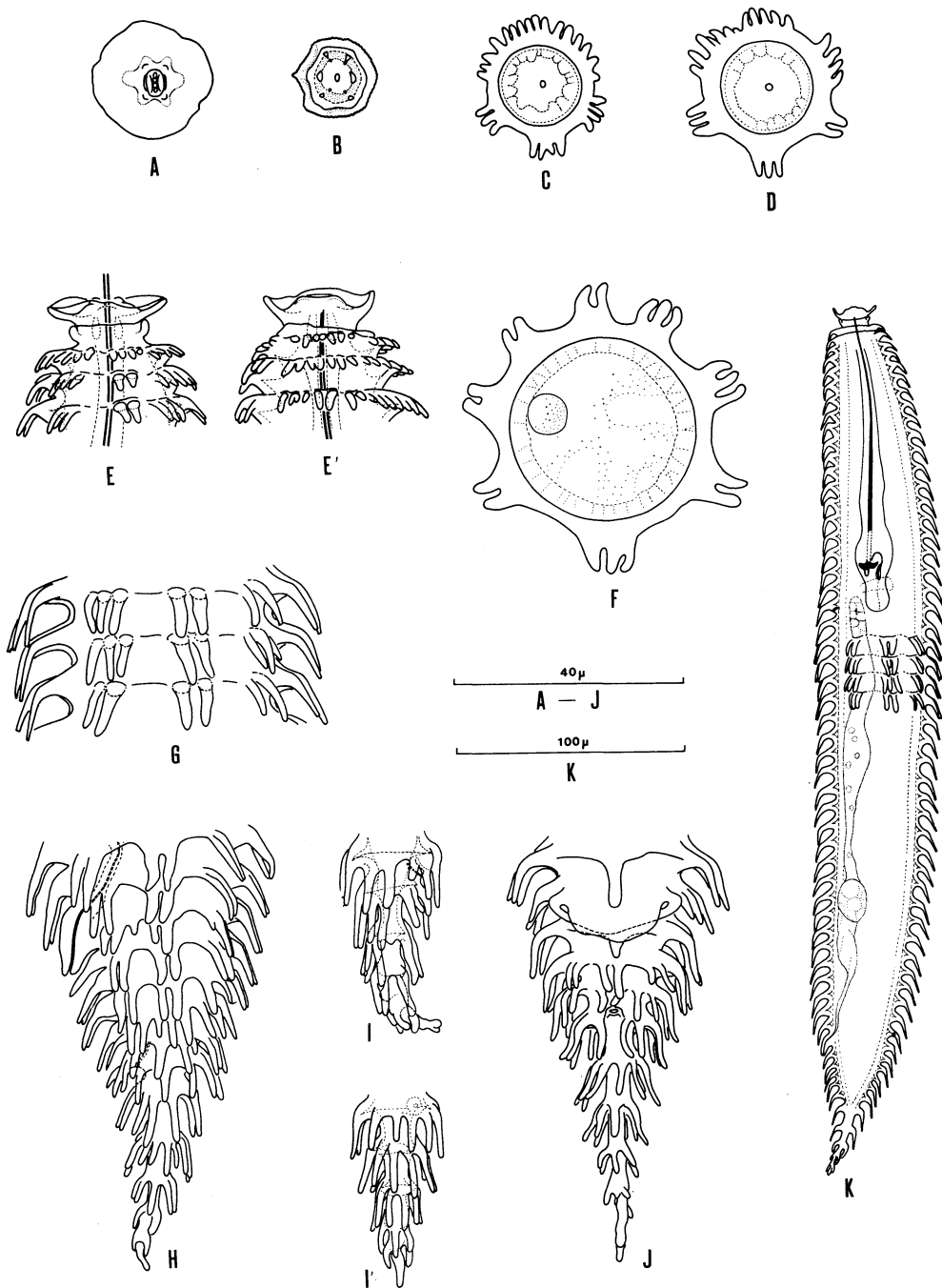


Fig. 1. *Crossonema octozonale* n. sp. Female. A: en face view, B: cross-section at second head annule, C: cross-section at first body annule, D: cross-section at second body annule, E-E': head, F: cross-section about mid-body, G: surface of mid-body, H: posterior portion, lateral view, I-I': tail, J: posterior portion, ventral view, K: entire.

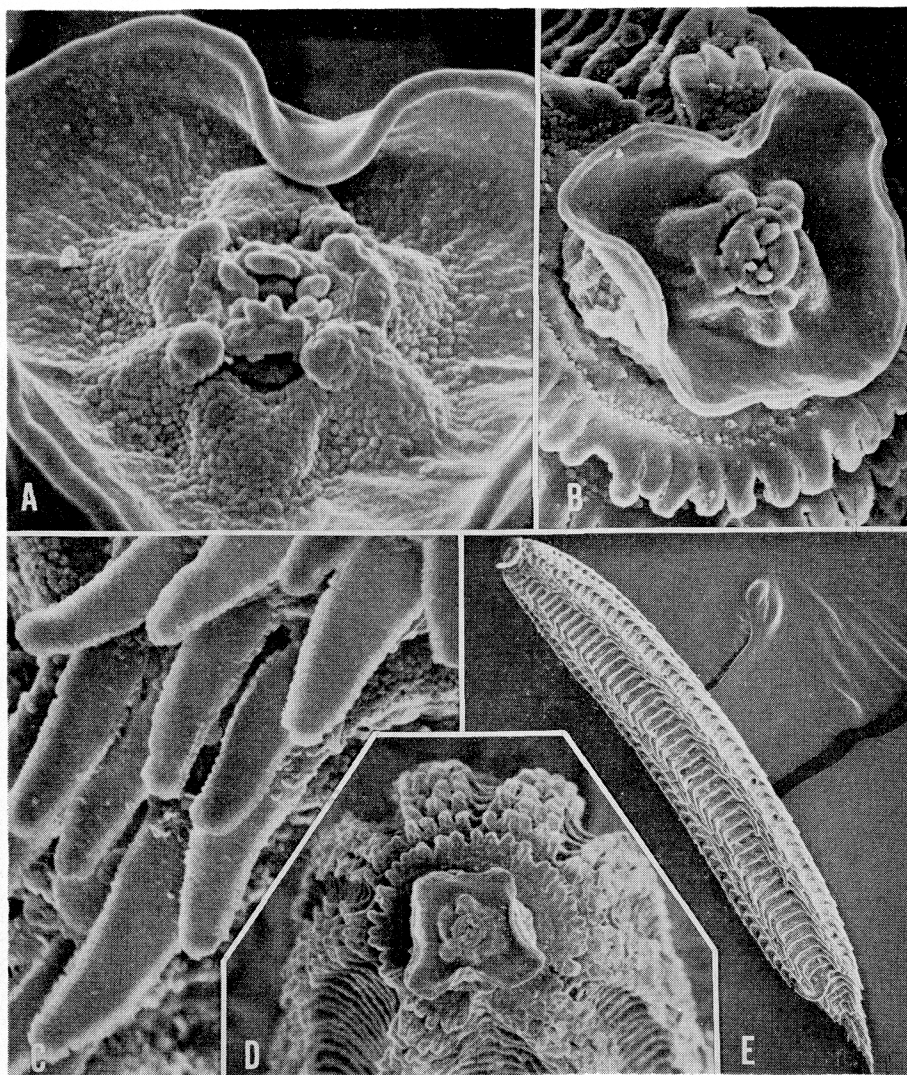


Fig. 2. Scanning electron micrographs of *Crossonema octozonale* n. sp. Female. A : en face view, showing six well-developed lips, four papillae, and an amphidial pore ( $\times 5,760$ ), B : do. ( $\times 2,400$ ), C : spines ( $\times 4,960$ ), D : en face view, showing eight longitudinal bands of spines ( $\times 1,120$ ), E : entire ( $\times 210$ ).